

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)

)
Amendment of the Commission's Rules
and Policies to Increase Subscribership
and Usage of the Public Switched Net-
work)

CC Docket No. 95-115

DOCKET FILE COPY ORIGINAL

COMMENTS OF U S WEST COMMUNICATIONS, INC.

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September 27, 1995

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SUMMARY

In the instant docket the Federal Communications Commission ("Commission") seeks comment on additional ways in which the Commission might increase telephone subscriber rates in the United States, particularly in rural areas. In these comments, U S WEST Communications, Inc. ("U S WEST") describes some of its own efforts in the area of adding and retaining telephone subscribers. U S WEST concludes that additional federal action in such areas as telephone security deposits and disconnect policies are not necessary. However, in the area of rural subscribership, expanded Commission policies making microwave frequencies available for use in providing telephone exchange service can clearly contribute to the availability of telephone exchange service to remote areas.

The first area addressed in these comments is the relationship between various telephone disconnect, reconnect and long distance access policies and the telephone subscribership rate. Telephone subscribership within the U S WEST area is, with one exception (New Mexico), above the national average despite the highly rural nature of much of this territory. While U S WEST does not necessarily draw a correlation between its practices and subscribership levels, U S WEST does not disconnect customers for non-payment of the bills of interexchange carriers, and has a variety of services available to customers to block access to carriers (as well as options substituting such blocking in lieu of a deposit). These options are described in these comments.

In addition, U S WEST has considerable experience in providing local exchange service via wireless technology. In these comments we describe several such

efforts. It is clear that a key to increasing telephone exchange service availability in remote areas is creative utilization of the radio spectrum, and the Commission is urged to give serious attention to efforts of carriers to utilize wireless technology for such purposes.

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COMMENTS OF U S WEST COMMUNICATIONS, INC.

U S WEST Communications, Inc. ("U S WEST") hereby submits it comments on the above-captioned Notice of Proposed Rulemaking.¹ In the Notice, the Federal Communications Commission ("Commission") seeks comment on whether additional federal measures may be appropriate in order to increase overall United States telephone subscribership -- as part of the Commission's statutory mandate to promote universal telephone service. The Notice observes that, while overall telephone subscribership has grown to 94 percent of households, several states and economic and demographic groups have subscribership levels well below that figure.² Various analytical constructs and possible regulatory vehicles for increasing telephone subscribership are set forth for comment. U S WEST has several areas where its expe-

¹ In the Matter of Amendment of the Commission's Rules and Policies to Increase Subscribership and Usage of the Public Switched Network, CC Docket No. 95-115, Notice of Proposed Rulemaking, FCC 95-281, rel. July 20, 1995 ("Notice").

² Id. ¶ 1.

rience with telephone subscribership levels might prove helpful in a meaningful resolution of this docket.

Before addressing U S WEST's direct experiences in this area, we wish to observe that a person not subscribing to telephone service in and of itself does not necessarily indicate the existence of a problem of federal dimensions. People may have a variety of reasons for not directly subscribing to telephone service, including many involving private decisions beyond the perview of legitimate federal interest. In the context of the instant docket (and these comments), we hasten to caution that far more than an individual's decision not to subscribe to telephone service is necessary before the Commission should even be considering additional federal regulations designed to increase subscribership beyond those levels which are supported by the current system. In other words, while we agree that access to a telephone is a vital commodity for most Americans -- a fact which the programs described below illustrate is taken very seriously by U S WEST -- the statistics set forth in the No-
tice do not by themselves demonstrate the existence of a problem of federal dimensions.

Moreover, local service denial and reconnection are issues of interest to state and local authorities as well as the Commission. In U S WEST's experience, the state regulatory authorities are fully cognizant of local subscribership matters. Even if subscribership issues are demonstrated which may warrant regulatory intervention, this intervention would be most productive or effective if it were to come

from the state, not the federal level. Any action arising from this docket must take appropriate account of state interests and jurisdiction.

I. LONG DISTANCE ACCESS

Based on a number of studies reviewed by the Commission, the Notice tentatively concludes that there is a possible correlation between subscribers “dropping off” the network and the ability of subscribers to access long distance facilities. Additional information is sought on such permutations of this topic as whether disconnection of local service for non-payment of long distance charges might be adversely affecting overall telephone subscribership,³ or whether the simple inability to control the accumulation of toll charges might be convincing some subscribers that continued subscription to telephone service is no longer an economical or desired choice.⁴ Several recent studies cited in the Notice suggest that it is the inability to control long distance charges, rather than any aspect of telephone service directly related to what is commonly known as local exchange service, that has had the largest and most unexpected impact on local subscribership in recent years.

U S WEST's own policies can perhaps be best evaluated in the context of its own subscribership levels. U S WEST provides local exchange service in 14 states. Using the national penetration level of 93.8% (households with a telephone), 12 of

³ Notice ¶ 13.

⁴ Id. ¶ 15.

U S WEST's 14 states exhibit subscribership levels above that average.⁵ One state, Wyoming, is slightly below the national average (93.5%), while one state, New Mexico, is well below the national average (88.3%). U S WEST's policies on long distance disconnection and blocking, as described below, however, are relatively uniform. Thus, the overall subscribership levels in the U S WEST territory are relatively high. The statistics for New Mexico are inconsistent with a correlation between U S WEST's policies and the state-wide subscribership levels, but this inconsistency can be attributed to a number of factors other than U S WEST's disconnect policies.

A. Disconnect for Non-Payment of Interexchange Carrier Charges

As a general principle, U S WEST does not provide a service where local exchange service is lost for non-payment of the bills of interexchange carriers -- even when those interexchange carriers are billed by U S WEST. While the ability to disconnect local service for non-payment of interexchange carrier bills is limited by statute or rule in several states (Colorado, Idaho, Montana, North Dakota and Wyoming), U S WEST as a policy matter does not generally disconnect for non-

⁵ Specific statistics for each U S WEST state, based on the 1994 annual average, are:

Arizona	93.9	New Mexico	88.3
Colorado	96.7	North Dakota	96.5
Idaho	94.7	Oregon	96.1
Iowa	96.8	South Dakota	94.7
Minnesota	95.6	Utah	95.7
Montana	93.9	Washington	96.0
Nebraska	96.7	Wyoming	93.5

payment of interexchange carrier charges in any of its states. Instead, U S WEST denies local service (Full Service Denial) only for non-payment of charges associated with U S WEST basic exchange services and U S WEST intraLATA toll charges. In some rural areas in which the U S WEST switch does not have Selective Carrier Denial capability (approximately 3% of U S WEST's central offices), Full Service Denial is still provided for non-payment of carrier charges billed by U S WEST.

U S WEST now utilizes both Selective Carrier Denial and Full Toll Denial as vehicles for enforcing an interexchange carrier's right to be paid for services billed by U S WEST. Selective Carrier Denial blocks access by the end user to the subscribing interexchange carrier network -- it is carrier specific. End-user access to the subscribing carrier via 1+, 0+, 00, 10XXX or 101XXX is denied. When U S WEST decided in the mid-1980s to adopt a policy which did not utilize Full Service Denial as an interexchange carrier billing collection technique, its first choice of an alternative was Selective Carrier Denial. Not having the technology available to support Selective Carrier Denial, U S WEST utilized an interim solution called Equal Access Restriction Service, which enabled U S WEST to deny access to a number of carriers in a pool. Equal Access Restriction Service was a manual process and was not particularly satisfactory, and, once Selective Carrier Denial was developed and the appropriate tariffs effective, the Selective Carrier Denial process was implemented.

However, Selective Carrier Denial itself posed some unanticipated problems. Most significantly, non-paying end users quickly became aware of the denial process

(which blocks access only to the interexchange carrier which the customer did not pay), and began "carrier hopping." That is, customers disconnected from one interexchange carrier for non-payment would simply switch to another interexchange carrier -- and not pay that interexchange carrier's bill either. U S WEST conducted a study in 1992 to determine the impact of Selective Carrier Denial on net bad debt. This study indicated that, on the average, net bad debt was 28.95% higher when Selective Carrier Denial was utilized as compared with Full Service Denial (monthly results ranging from a low of 18.6% higher to a maximum of 41.3% higher).

Based on its experience with Selective Carrier Denial, U S WEST initiated a new policy called Full Toll Denial. Full Toll Denial blocks access to all interexchange carriers' networks, and is initiated when the end user does not pay the U S WEST and/or interexchange carrier toll bills. The Full Toll Denial globally blocks the end user from the following services (interLATA and intraLATA, including U S WEST toll): 0+, 0-, 0+555, 0+900, 1+, 1+555, 1+700, 1+900, third number collect and U S WEST calling card. Full Toll Denial is currently available in Idaho, Iowa and Nebraska, and is scheduled for implementation in the state of Washington in December of 1995.

B. Toll Blocking Services

U S WEST permits customers in 11 of its 14 states to subscribe to toll blocking services -- often in lieu of paying a deposit. These end-user services, offered at

approximately \$3.00 per month, block the end-user line from accessing 0+, 1+ and 0-. Most end-user customers who subscribe to toll blocking services do so in lieu of a deposit for reconnection of previously disconnected service. However, some customers with no prior history of bad debts also subscribe to these services.

C. Reconnection

As noted above, U S WEST disconnects local service only for non-payment of U S WEST charges -- local service is not disconnected for non-payment of inter-LATA interexchange charges (with very limited exceptions as noted above). U S WEST's reconnection policies for end-user customers are as follows. In 11 of U S WEST's 14 states, U S WEST requires, as a condition of reconnection, that the customer agree to make good faith payments on their final bill. U S WEST generally accepts an arrangement that allows a customer to pay the final bill within six months. In addition, U S WEST requires that the customer secure the account in one of two ways: 1) a deposit based on the amount of the customer's final bill (generally two months of service); or 2) by subscribing to a U S WEST toll blocking service. These arrangements are deemed reasonably attuned to assisting customers in obtaining reasonable network access while protecting U S WEST and its rate-payers (in addition to carrying out U S WEST's interexchange carrier non-discrimination requirements).⁶

⁶ Many U S WEST state regulatory authorities are keenly interested in the impact of non-paying customers on the rates for those customers who do pay for service.

In three U S WEST states, the regulatory authorities have not approved the types of arrangements described above. In these states, reconnection to local service can occur only when the customer pays a cash deposit based on the amount of the final bill.

II. CONNECTION PROGRAMS

Referencing the Commission's Lifeline Assistance Programs,⁷ the Notice seeks additional information on how such programs can be made more effective, and proposes to "require carriers to adjust deposit requirements for low-income subscribers that agree to accept voluntary toll restriction service." Current Commission (and the National Exchange Carrier Association, Inc.) overseen lifeline programs specifically exclude lifeline assistance to cover security deposits.⁸ The Notice seems to concede that there is no evidence which would support the premise that such a rule would actually increase telephone subscribership, but does conclude that security "deposits present a formidable obstacle to initiating service. The required deposit may be particularly high if the subscriber was previously disconnected for nonpayment of long-distance charges."⁹

⁷ Notice ¶ 26.

⁸ 47 CFR § 36.711(d).

⁹ Notice ¶ 25.

Several observations seem pertinent here.

First, U S WEST has approved Federal Link-Up programs in place in all 14 of its states. Thus, the federal program is being fully utilized by U S WEST. However, as the Commission is aware, the Link-Up program is a sophisticated one, undertaken after serious consideration by both a Federal-State Joint Board and this Commission. Significant issues such as funding, cost recovery and jurisdiction were highlighted and factored into the Link-Up decision. The notion that the Commission should, or ought to, adopt what really appears to be a simplistic solution to a complex problem without conducting an extensive cost/benefit analysis considering the factors which supported the current Link-Up program is really not sustainable.

Second, states do take the subscribership issue seriously. U S WEST has state telephone assistance programs ("TAP") which operate in cooperation with the federal program in place in 12 of its 14 states. These programs, which generally utilize and supplement the subscriber line charge reductions supported by the Commission, provide a variety of types of assistance to low income and other needy groups (e.g., the elderly) in covering recurring telephone expenses.

Third, security deposits are also primarily a state issue -- all U S WEST security deposits are governed by state tariff. The Commission would seem to be inviting a jurisdictional hassle if it were to mandate that intrastate deposits be waived -- especially when states are addressing the very subscribership issues named in the instant docket. In fact, we submit that a Commission decision directing that U S WEST waive intrastate mandated security deposits would be highly

suspect, at least in the absence of fairly intense scrutiny by a Federal-State Joint Board convened in accordance with Section 410 of the Communications Act.¹⁰

Fourth, and along the same lines, U S WEST is already offering some security deposit relief to those customers who are willing to order toll restriction service. Some states prefer not to permit this type of practice at this time, but 11 of U S WEST's states do permit and encourage it. In fact, sixty percent of customers utilizing the toll restriction service have not previously been disconnected. There is no indication that addressing this particular problem at the national level will be any more effective than the current state efforts.

III. RURAL AREAS AND NEW TECHNOLOGY

The Notice also seeks comment on the extent to which new technology (primarily wireless technology) can be utilized to increase or bring service to geographic areas which cannot be efficiently served with existing (or traditional) telephone equipment.¹¹ As U S WEST's geographic territory covers approximately one-third of the continental United States, but this area contains only about ten percent of the country's population, U S WEST has some experience in dealing with bringing service to remote areas.

Initially, the Notice's conclusion that wireless technology represents the best method of serving remote areas is clearly correct. This is true for several reasons.

¹⁰ 47 USC § 410.

¹¹ Notice ¶ 41.

First, it is more cost effective. Many remote areas without current service lack both adequate feeder plant and distribution facilities. Feeder plant generally spans greater distances, and is considerably more costly to provide than is distribution plant. However, large concentrations of customers permit feeder plant costs to be distributed economically in most areas. However, in many rural areas, there are few, if any, economies of scale which can result in cost economies in feeder plant construction. In U S WEST's territories, the average cost-per-line to alleviate existing rural area held orders (orders which cannot be processed because of absence of facilities) with landline facilities is estimated to exceed \$26,000. New non-wireline technologies, as deployed, will help in significantly reducing rural area held orders.

Moreover, some areas are not serveable via landline facilities even if cost were not a consideration. For example, the bottom of the Grand Canyon in Arizona is served by multiple emergency phones accessed via radio (Basic Exchange Telecommunications Radio Service ("BETRS")¹² as well as conventional point-to-point microwave). A similar area exists northwest of Taos, New Mexico across the Rio Grande Gorge. Several residential clusters are isolated from the town by the Gorge, which is approximately 900 feet deep and a half a mile wide. A single suspension bridge spans the Gorge and is the only artery serving approximately six communities (plus an FAA Vortac site). U S WEST does not have right-of-way to extend facilities across the bridge, leaving radio as the only service option. In this case,

¹² See In the Matter of Basic Exchange Telecommunications Radio Service, Report and Order, 3 FCC Rcd. 214 (1988).

however, the radio system is obsolete (the license is dependent on keeping the existing equipment in place, and the equipment has been manufacturer-discontinued) and does not serve all of the subdivisions in the area. Again, the microwave alternatives discussed below show promise in better extending service to this area. Similar areas exist throughout U S WEST's territory.

An important use of microwave technology to extend basic exchange service to rural areas is BETRS.¹³ BETRS is a microwave service in which certified local exchange carriers ("LEC") can obtain spectrum licenses in order to extend the reach of their local exchange services to areas not economically serveable by wireline facilities. Currently U S WEST has 16 operational BETRS systems. These systems serve a total of 300 subscribers in remote areas in seven states. The cost per BETRS loop varies from a low of \$3,600 per subscriber up to \$72,000 per subscriber, depending on population density.

However, as the Commission is aware, BETRS is not a perfect solution. Current BETRS technology data transmission rates is limited to 2400 Bps. Moreover, BETRS frequency assignment is often less than ideal, with only a limited number of channels available for simultaneous use in most communities. Call blocking during busy hours is common with BETRS (a specified blocking rate of P.025 cannot be advised except in very sparsely populated areas), as is co-channel and adjacent channel interference. BETRS is susceptible to industrial radio and paging interference. While BETRS offers a reasonable solution for some customers, it is not a

¹³ Notice ¶ 41.

panacea for expanding telephone availability in rural areas. Accordingly, other microwave technologies also deserve additional consideration.

Satellite technology can be used to provide service to virtually any subscriber. During 1994, U S WEST conducted a ten-month satellite trial in Wyoming, using satellite technology to bring local exchange service to 38 subscribers in 16 communities (STA-245; 243-SSA-94, 244-SSA-94, 245-SSA-94). All subscribers were served using a satellite hop to connect to the public switched network. This trial proved successful overall as customers were happy to have service. Several shortcomings were also discovered in this use of satellite technology: First, there is an inherent time delay caused by the 22,300 mile uplink and downlink (300 milliseconds) which can be exacerbated (doubled, actually) if the second party is also served by satellite. Customers were generally unhappy with the delay. Second, satellite systems do not have a loop current feed open condition from the subscriber terminal, which means that customer premises equipment such as FAX machines, modems and telephone answering machines will not automatically disconnect upon call completion. Third, because satellite technology uses 32 Kb (rather than 64 Kb) coding, this service may provide slow data transmission (or file downloads) to 300-500 baud. Finally, satellite technology as it exists today is highly sensitive to heavy rainfall, and is subject to outages during the vernal and autumnal equinoxes. Nevertheless, satellite loop technology retains promise as a means of serving extremely remote areas with basic local exchange service.

U S WEST is also investigating the use of Fixed Wireless Loops under an experimental authorization in the Taos, New Mexico area (EA 4511-EX-PL-94). The trial employs a Time Division Multiple Access ("TDMA") point-to-multipoint radio system which transmits 64 Kbps Pulse Code Modulation ("PCM") speech with no compression. High speed data rates are available up to 64 Kbps synchronous and 19.2 Kbps asynchronous. The system can support up to 1,025 lines shared on a demand basis with 60 radio channels, each of which is capable of one DS-0 (64 Kbps PCM voice channels). All 60 channels are multiplexed on a single channel pair. An additional pair is required if a repeatered configuration is required, but all receiving sites have access to all 60 channels.

This trial utilized an experimental license to use the frequencies 2300-2310 and 2390-2400 Mhz (the latter spectrum since allocated for unlicensed Personal Communications Service ("PCS")). In Taos, only 3.5 Mhz of the allocated spectrum was used, primarily due to the fact that customers were chosen to participate in the trial only if backup facilities would be available upon conclusion of the trial (which limited trial participation). Nevertheless, 14 customers in the Taos area participated in the trial, and participation could be much higher based on use of a repeatered system which could expand the geographic area served. In addition, the trial could not promise that it could be continued (which turned out to be the case). The Taos area without service which could be served with this technology encompasses 1,056 square miles. This area contains 144 households which could be served with TDMA Fixed Wireless Loop technology. The cost per loop was esti-

mated to be \$3,550 per subscriber using TDMA Fixed Wireless Loop technology. Due to unique rock conditions in the area, it is estimated that a wireline addition could not be constructed for less than \$100,000 per subscriber. Clearly, an economic alternative is needed to address remote rural needs in such areas as Taos.

Overall, this trial was a success, and customer response was extremely positive. Voice quality was consistently rated as good or excellent and the vertical features tested (e.g., call waiting) were also rated a success. The functionality of the U S WEST Fixed Wireless Loops proved, at least in the trial, to be superior to BETRS in both spectral efficiency and functionality. It is U S WEST's opinion that this technology exhibits tremendous promise in serving extremely rural areas.

In this regard, U S WEST sponsored Fixed Wireless Loop forums in December 1994 and February 1995, attended by 18 LECs and 15 U.S. and foreign manufacturers. There was unanimous agreement in both forums that there is a need for Fixed Wireless Loop systems which support multiple environments.

U S WEST recommends that the Commission consider a rulemaking to examine frequency assignments for Fixed Wireless Loop local exchange service in remote areas -- exempt from the competitive bidding process in much the same way as BETRS assignments are currently handled.

Such an approach would assure that a wireless solution to basic service needs in remote areas would not be rendered cost-prohibitive through the market process of spectrum auction or subsequent negotiation with successful bidders. Such a scenario could pre-empt an otherwise promising and cost-effective means of extending


basic phone service to a segment of the population both unserved and unserveable through wireline technology.

In short, it is U S WEST's belief that remote areas can be assured of cost-effective local exchange service via creative use of microwave technology. The Commission should work with the industry to ensure that sufficient spectrum is available to permit such services to develop.

Respectfully submitted,

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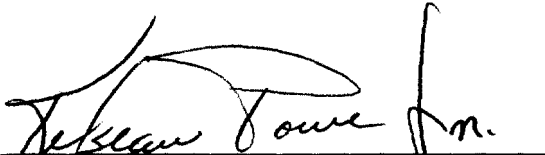
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September 27, 1995

CERTIFICATE OF SERVICE

I, Kelseau Powe, Jr., do hereby certify that on this 27th day of September, 1995, I have caused a copy of the foregoing **COMMENTS OF U S WEST COMMUNICATIONS, INC.**, to be served via hand-delivery upon the persons **listed** on the attached service list.



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